

Collection Management Strategies in a Digital Environment

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Background

Collection Management Strategies in a Digital Environment, also known as the Collection Management Initiative, is the formal title of a two-year grant project funded by the Andrew W. Mellon Foundation. The grant was awarded to the University of California on January 1, 2001 and extends through December 31, 2002.

Mellon expressed an interest in funding experiments that would test academic and research libraries' ability to manage their collections that increasingly consist of a mix of print and digital materials. In early 2000, the University initiated a planning process to develop a research grant to explore the complex issues associated with integrating and managing research library journal collections composed of shared print and digital formats. The University was awarded a planning grant by the Mellon Foundation to develop a fuller proposal for a research project. In support of these efforts, a Universitywide committee made up of faculty and academic administrators who advise the University on library planning issues approved a resolution endorsing "the implementation, beginning no later than January 2001, of experiments that would help the University increase its understanding of strategies for creating a durable, reliable archive of its digital collections and of issues arising from the development and implementation of these strategies." See URL <http://www.slp.ucop.edu/consultation/slasiac/> for the complete text of Resolution A. The final research grant from Mellon was awarded in late 2000 to begin in January 2001.

The University of California is particularly well suited to undertake such a complex and extensive research project. Several factors, including a history of collaboration, an infrastructure and extensive digital collections, supported the University's application to the Mellon Foundation:

- A long history of collaboration, as evidenced by resource sharing agreements among the nine campuses; a patron initiated online "Request" service, which is increasingly replacing the more staff-intensive campus Interlibrary Loan operations for UC owned materials; and an overnight courier service to deliver books and journals among the campuses.

- An infrastructure to support access and resource sharing that combines a union catalog (the Melvyl catalog) of library holdings for all UC campuses with over 150 online reference databases and indexes with citations linked to full text digital resources.
- Extensive shared digital and print collections. For example, all the journal titles selected for the study are held in print form by more than one campus of the University and digital versions are available on all the campuses.
- Two regional storage facilities that house ‘seldom used’ library materials from all campus libraries, one housed in northern California and one in the south.

In addition to an infrastructure that supports and encourages resource sharing among the campuses, UC was seeking long term solutions to collection management issues that would relieve pressure on physical facilities and capital budgets and would leverage the University’s investment in extensive digital collections. Among the motivating factors that led to the University’s taking on such a complex project are:

- Overcrowded physical facilities: Many UC libraries are currently full or nearly full. The University does not anticipate sufficient additional funding for new buildings over the next decade that would satisfy library space needs on every campus. Financial support for capital expenditures on UC campuses is dependent on bond issues and a strong economy. Even if capital funding were abundant, libraries must compete for funding with proposals for new classroom buildings and faculty office space.
- Need to address urgent seismic safety deficiencies and replace deteriorating campus infrastructure: The University of California has a compelling interest in managing existing library facilities to accommodate continually-growing collections, while relieving demands on its overtaxed capital program.
- Projected increase in enrollment: Over the next ten years UC is anticipating an enrollment increase of 60,000 new students that will most certainly impact the priorities for capital expenditures.

Objectives for the project

The overarching goal of the project is to explore issues associated with integrating and managing research library journal collections composed of print

and digital formats. The study will evaluate the factors that affect reliance on digital resources to relieve pressure on physical facilities and capital budgets.

The specific objectives of the grant are to:

- Study the behavior and attitudes of users when selected print journals for which electronic access is provided are relocated to a remote storage facility and primary use is of the electronic version, and ascertain the variety of factors affecting the acceptability of digital publications as a substitute for the equivalent print publications
- Design and test processes for consultation and decision-making for selection, processing, relocation and administrative management of print materials relocated to remote storage
- Document the costs incurred and avoided for maintaining selected journal titles for which electronic access is provided when paper copies of the journals are relocated to a storage facility and primary use is of the electronic version
- Document the change in usage of digital and print versions of selected journal titles when print is relocated to storage
- Assess the institutional implications for library organization and operations, including facilities planning, capital budgeting, systems and resource management
- Evaluate institutional strategies and policies for archiving of research library materials in a mixed print/digital environment.

Criteria for the selection of journals

The following criteria were developed by project staff during the planning phase to inform the selection process and to aid librarians who were consulting with faculty, students and colleagues on their campuses in the decision-making process.

- All journals selected must be available in digital form on all campuses
- The print journal must be held in more than one library in the UC system to enable us to gather usage data for print runs on library

shelves as well as usage data for print journals relocated to a storage facility

- Sufficient use data must be available from the electronic journal publisher in order to obtain use by title and use by campus
- The choice of journals should allow us to study a variety of factors influencing use, including disciplinary and content characteristics, such as graphics, language, and article length
- The sample of journal titles must include titles for which current issues are available in digital form and titles for which the digital version is available only retrospectively in back runs (e.g., JSTOR titles), so that we can gather cost, usage and behavioral data for both publishing models
- The sample of journal titles should include multiple publishers of electronic journals.

Phases of the Grant

The grant covers a two year period (from January 1, 2001 to December 31, 2002) and is being implemented in three phases:

- Phase 1: Consultation and decision-making including the identification of journal titles to be included in the study and the campuses that will participate (January 1 – September 30, 2001)
- Phase 2: Implementation of the actual experiment when print journals are relocated to storage and the gathering of data of ongoing (October 1, 2001 – September 30, 2002)
- Phase 3: Evaluation of Institutional Strategies, Policies, and Programs for archiving and management of collections in the print and digital environment (July 1 – December 30, 2002). Note that Phase 2 and 3 overlap.

Phase 1 posed the most difficult challenges to the campuses and to the grant staff. The selection of journal titles and the related bibliographic work that was needed to match journals from two campuses was more difficult than had been anticipated. Originally, Phase 1 was scheduled to last six months but was extended to nine months. At this writing, the campuses are completing Phase 2, the yearlong period during which journals are located in storage and staff are collecting usage and cost data.

Implementation of the experiment

In order to create the necessary conditions for the experiment and to set the stage for data gathering, librarians on the campuses of the University of California worked with project staff to identify 300 journal titles. Libraries on all nine campuses participated in the study.

One copy of a print journal run, called “an experimental journal” for purposes of the study was placed in storage. A second print copy, called “a control journal,” was identified and maintained on library shelves on another campus. Use data for the experimental journals, the control journals and the ejournals is being gathered during the yearlong study.

Once the journal titles were selected, print volumes and issues for which electronic content was available, were relocated to remote storage. These journals will remain in storage for a year while use data are gathered. Even though the experimental print journals are in storage, the library will bring a volume or issue back or supply a photocopy upon request.

Use data

The definition of use of an experimental journal is defined as ‘each request by a library patron at the owning campus library for a volume or unbound issue or for a copy of an article contained in a study volume or issue’.

As an example, French Historical Studies, volume 22 (1999) to the present, held on the Irvine campus, was relocated to the University’s Southern Regional Library Facility at the beginning of the study. A control copy of the same journal, French Historical Studies, is housed on campus in the library at UCLA. During the study use data will be gathered for that copy of the journal as well. The definition of use for control journals is ‘each instance of re-shelving of a volume or an issue’ during the study period.

Use data for print and digital copies of the 300 journals in the study has been collected for the first and second quarters of the experiment. Print use data only is available for the third quarter.

Behavior and preference data

A critical part of the research for the grant will be to gather information about user attitudes and preferences when primary access to journals is the digital version. Grant staff has utilized various methodologies to gather user preference data, including face-to-face interviews that will inform the design of a broad survey to gather information about user preferences and behavior.

Cost data

Dr. Michael Cooper, School of Information Management and Systems, UC Berkeley, was engaged as a consultant to the project. He developed an extensive research framework for acquiring and analyzing relevant costs in the following categories:

- Access and circulation costs (applicable in varying ways to both print and digital use, including print use from storage for the "experimental journals," and including costs both to the library and the user)
- Selection, transfer and processing of titles for storage
- Ongoing storage costs for print journals (campus and storage)

During Phase 1, grant staff gathered cost data from each campus library that participated in the study, including the costs of management activity, preparation for the relocation of journals, selection of titles, bibliographic record changes, processing, publicity to library users about the project, and staff training. Campus librarians completed a survey form indicating the number of hours devoted to each activity and the level of staff that performed those tasks. In addition, cost data were gathered from the regional library storage facilities in order to determine the cost of processing and storing print materials. Special studies may be required to capture costs of activities not included in this survey.

These data are being translated into unit costs in order to more effectively project expenditures and savings in the future. For example, as a result of the study, staff will be able to estimate costs for selecting titles and relocating journal volumes to storage, including loading volumes into boxes or trucks, transporting volumes, updating records, recataloging and shelving and handling at the storage facility. Ongoing costs of storing print journals has been estimated in terms of acquisitions, processing, circulation, requests from the campus, retrieval and return to the campus as well as additional transportation costs

In addition, cost avoidance and cost savings are being estimated in terms of recovered space in campus libraries where journals to be relocated to storage or discarded, centralized processing in lieu of multi-campus processing operations, and savings of print subscriptions and binding costs. To estimate potential savings as a result of canceling print subscriptions, an analysis was done to estimate savings where print journals to be cancelled. The analysis focused on the publishers and providers of the journals selected for the Collection Management Initiative project. In spite of restrictions in license agreements the analysis showed that substantial savings can be achieved.

During the final phase of the project various planning and management groups within the University will assess what we have learned during the study and develop University-wide strategies, policies and programs for archiving and managing collections in both print and digital form. Cost data gathered as part of the CMI study will be invaluable for planning future strategies for managing print and digital collections effectively.

List of sources

UC Office of the President, Collection Management Initiative website,
<http://www.ucop.edu/cmi/welcome.html>

Cooper, Michael D. "The Sensitivity of Book Storage Strategy Decisions to Alternative Cost Assumptions", Library Quarterly. 61:4 (October 1991) 414-428.

Cooper, Michael D. "A Cost Comparison of Alternative Book Storage Strategies," Library Quarterly 59:3 (July 1989) 239-260.

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